

The Atomic Theory

The History of The Model Of The Atom

Democritus-440 BC

Believed that there was a particle that could not be divided

He named his particle an atom; which means “can’t be divided”

Today we label the atom as “ the smallest unit of an element that maintains the properties of that element.”

Dalton’s Atom-1803



He believed that elements were made of a single atom

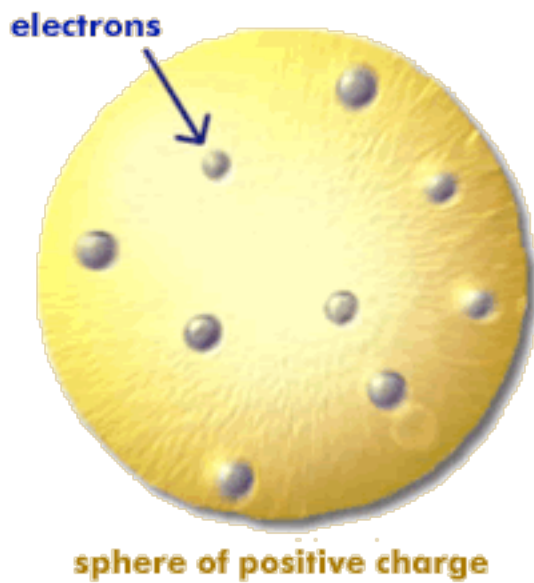
All substances are made of atoms.

Atoms are small particles that cannot be created, divided or destroyed.

Atoms of the same element are exactly alike.

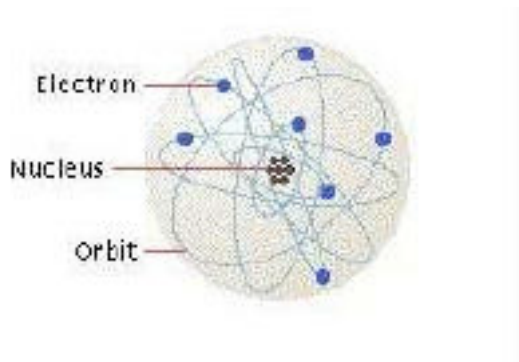
Atoms join with other atoms to make new substances.

Thomson's Atom-1897



He discovered that the atom had negatively charged particles called electrons.
He believed that the electrons were mixed around in the atom, like plum pudding.
He shot a negatively charged beam through a glass tube and the beam seemed to be attracted to a positively charged plate. Opposites attract.

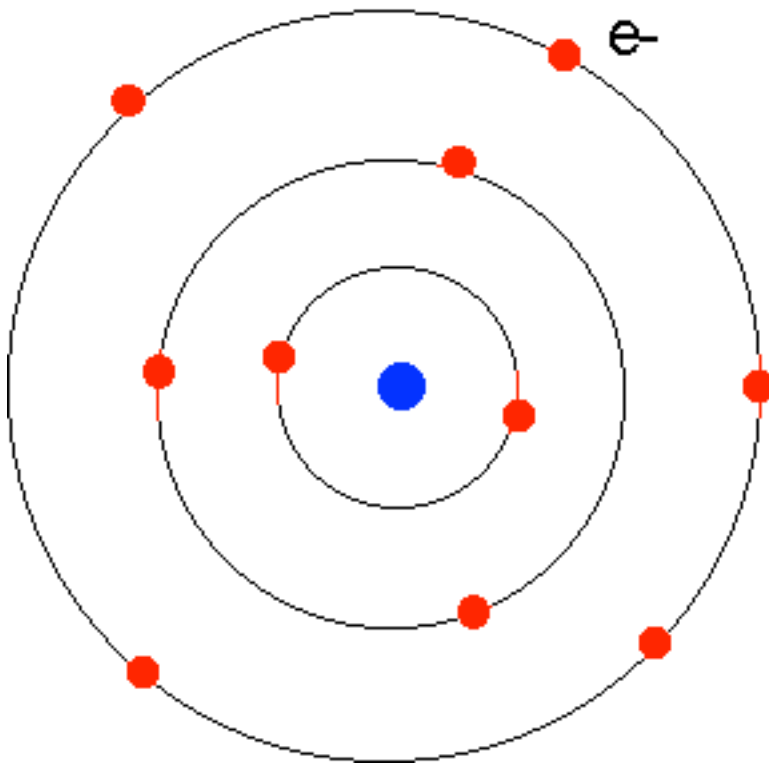
Rutherford's Atom-1911



He believed that the atom had a densely packed center called a nucleus and that the rest of the atom had a lot of open space.

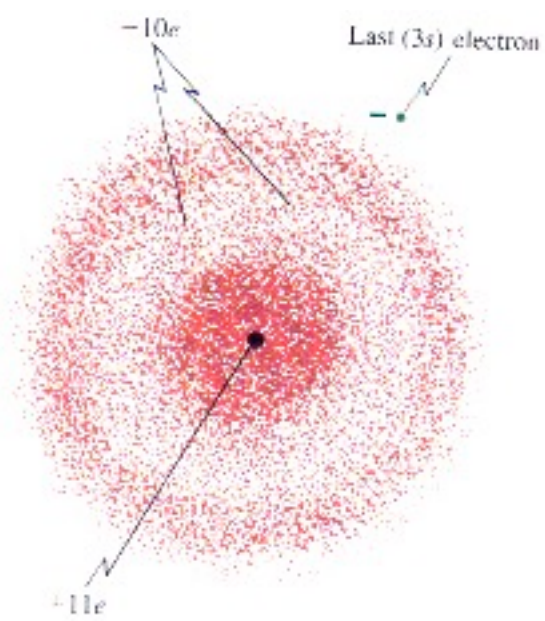
He shot a positively charged beam at a gold plate. Most went through, some deflected. Some deflected because there was a positive substance in gold (or any element). Likes repel.

Bohr's Atom- 1913



He believed that the electron's traveled in regular paths around the nucleus. Each atom had different shells of electrons.

Electron Cloud Model- 21st century



There are regions in the atom where electrons are likely to be found. They do not travel in regular paths.